IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A method for improving performance sensitivity and facility of operation of an array including microbolometers, comprising:

applying N bias pulses substantially sequentially during a frame time to each microbolometer in the array, wherein N is 2 or greater, and wherein the N bias pulses have a shorter time duration and frequency, selected such that a resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses is substantially uniform during the frame time, wherein the time duration of each bias pulse is 1/N times that of a single pulse suitable for reading the array;

measuring N resulting signals corresponding to the N bias pulses;

computing an average signal value from the N resulting signals corresponding to each microbolometer in the array during the frame time; and

producing an output signal based on the computed average signal value for each microbolometer in the array during the frame time.

2. (Previously Presented) The method of claim 1, further comprising:

repeating the applying, measuring, computing, and producing steps to compute output signals during each frame time.

3. (Previously Presented) The method of claim 2, further comprising:

applying a corrective electrical signal to the output signal to correct for resistance non-uniformity between the microbolometers in the array to obtain a substantially uniform output signal value.

4. (Previously Presented) The method of claim 3, further comprising:

converting the substantially uniform output signal value associated with each microbolometer in the array to a digital signal value.

5. (Previously Presented) The method of claim 4, further comprising:

passing the digital signal value associated with each microbolometer in the array through a digital image processor to correct for image defects.

6. (Previously Presented) The method of claim 5, wherein the image defects comprises:

image defects selected from the group consisting of fine offsets, gain non-uniformity, and dead pixels.

7. (Original) The method of claim 1, wherein the bias pulses are substantially equal in magnitude.

8. (Original) The method of claim 1, wherein the bias pulses are substantially equally spaced in time.

9. (Previously Presented) The method of claim 1, wherein the bias pulses comprise:

voltage bias pulses.

10. (Previously Presented) The method of claim 1, wherein the N resulting signals comprises:

N current signals.

11. (Previously Presented) The method of claim 1, wherein N is in the range of about 2 to 100 bias pulses.

12. (Previously Presented) The method of claim 1, wherein each of the N bias pulses has a time duration in the range of about 0.1 to 20 microseconds and wherein the temperatures varies less than one degree Celsius.

13. (Canceled).

14. (Previously Presented) An infrared radiation detector apparatus, comprising:

microbolometers in an array;

a timing circuit coupled to the array to apply N bias pulses substantially sequentially to each microbolometer in the array during a frame time such that a resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses is substantially uniform during the frame time;

a measuring circuit coupled to the array to measure N resulting signals associated with each of the applied N bias pulses during the frame time;

a computing circuit coupled to the measuring circuit to compute an average signal value for each microbolometer in the array from the measured N resulting signals during the frame time; and

an output circuit coupled to the computing circuit to produce an output signal based on the computed average signal value for each microbolometer in the array during the frame time.

15. (Previously Presented) The apparatus of claim 14, wherein the output circuit further comprises:

an integrator and an A/D converter wherein said output signal produced is a digital signal value for each microbolometer in the array.

16. (Previously Presented) The apparatus of claim 15, further comprising:

a digital image processor, coupled to the output circuit to receive the digital signal value associated with each microbolometer of the array and correct the received digital signal value for image defects.

17. (Previously Presented) The apparatus of claim 16, wherein the digital image processor further comprises:

a correction circuit, to apply a corrective electrical signal based on a correction value to the output signal to correct for resistance non-uniformity in each microbolometer to obtain a uniform output signal value.

18. (Previously Presented) The apparatus of claim 17, wherein the correction circuit further corrects the uniform output signal value for fine offsets, gain non-uniformity, or dead pixels.

19. (Previously Presented) The apparatus of claim 18, wherein the digital image processor further comprises:

digital memories to store the correction values for each microbolometer in the array.

20. (Previously Presented) The apparatus of claim 14, wherein the N bias pulses are substantially equal in magnitude.

21. (Previously Presented) The apparatus of claim 20, wherein the N pulses are substantially equally spaced in time.

22. (Previously Presented) The apparatus of claim 14, wherein the N bias pulses are voltage bias pulses.

23. (Original) The apparatus of claim 22, wherein the resulting signals are current signals.

24. (Previously Presented) The apparatus of claim 14, wherein the N bias pulses are in the range of about 2 to 100 bias pulses.

25. (Previously Presented) The apparatus of claim 24, wherein the N bias pulses have time duration in the range of about 0.1 to 20 microseconds.

26. (Canceled).

27. (Previously Presented) A signal processing electronics circuit for an array including microbolometers, comprising:

a timing circuit coupled to the array to apply N bias pulses substantially sequentially to each microbolometer in the array during a frame time such that a resulting temperature in each of the microbolometers in the array due to such applying of N bias pulses varies less than one degree Celsius during the frame time, wherein N is greater than one and such that the length and frequency of pulses reduce noise compared to N=1 pulses in a frame time;

a measuring circuit coupled to the array to measure N resulting signals, respectively associated with each of the applied bias pulses during the frame time;

a computing circuit coupled to the measuring circuit to compute an average signal value for each microbolometer in the array from the measured resulting signals during the frame time; and

an output circuit coupled to the computing circuit to produce an output signal based on the computed average signal value for each microbolometer in the array during the frame time.

28. (Canceled).

29. (Previously Presented) The circuit of claim 27, wherein the output circuit further comprises:

an integrator and an A/D converter wherein said output signal produced is a digital signal value for each microbolometer in the array.

30. (Previously Presented) The circuit of claim 29, further comprising:

a digital image processor coupled to the output circuit to receive the digital signal value associated with each microbolometer to correct for image defects such as fine offsets, gain non-uniformity or dead pixels.

31. (Previously Presented) The circuit of claim 30, wherein the digital image processor further comprises:

a correction circuit to apply a corrective electrical signal based on a correction value to the output signal to correct for any resistance non-uniformity in each microbolometer to obtain a uniform output signal value.

32. (Previously Presented) The circuit of claim 31, further comprising:

a memory to store the correction value associated with each microbolometer in the array.

33. (Previously Presented) The circuit of claim 27, wherein the N bias pulses are substantially equal in magnitude.

34. (Previously Presented) The circuit of claim 33, wherein the N bias pulses are substantially equally spaced in time.

35. (Previously Presented) The circuit of claim 27, wherein the N bias pulses are voltage bias pulses.

36. (Previously Presented) The circuit of claim 35, wherein the resulting signals are current signals.

37. (Previously Presented) The circuit of claim 27, wherein the N bias pulses are in the range of about 2 to 100 bias pulses.

38. (Previously Presented) The circuit of claim 37, wherein the N bias pulses have time duration in the range of about 0.1 to 20 microseconds.

39. (Canceled).